

**Council on Postsecondary Education
Policy Review and Funding Development Process**

ISSUE PAPERS

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OVERVIEW

The following papers identify key policy issues that the Council on Postsecondary Education will consider over the next six to 12 months. The papers provide an overview of each of the policy issues, including challenges, current Council initiatives, and possible actions. The papers are a launching point for detailed discussion and analysis with the goal of developing a series of policy and funding recommendations for consideration by the Council, General Assembly, Governor, or other policymaking bodies as appropriate.

A number of these policy issues are already in different stages of development and analysis and will likely progress on different timelines for action. Nevertheless, a typical process for moving these policy issues forward might include the following:

- 1) Discuss problems
 - Gain a general sense of concerns or challenges regarding each issue
- 2) Conduct preliminary analysis
 - Clearly define problem
 - Identify key assumptions
 - Analyze and synthesize data and research
 - Develop preliminary policy recommendations
- 3) Review with Council members, staff, and others
 - Share analyses and preliminary policy recommendations
 - Get feedback, comments, challenges to assumptions, etc.
 - Identify those affected by the policy and why
 - Explore effectiveness of the policy, impact, and measure success
- 4) Draft reports and make presentations
 - Get additional feedback, comments, and suggestions
- 5) Present recommendations to the Council for approval

The policy papers are prompted by the desire to move the state forward on the long-term goals outlined in reform legislation and are directly linked to the Council's current strategic plan, *Five Questions - One Mission: Better Lives for Kentucky's People, A Public Agenda for Postsecondary and Adult Education 2005-2010*. The Public Agenda is framed by five basic policy questions that will guide the work of the entire adult and postsecondary education system through 2010:

1. Are more Kentuckians ready for postsecondary education?
2. Is Kentucky postsecondary education affordable for its citizens?
3. Do more Kentuckians have certificates and degrees?
4. Are college graduates prepared for life and work in Kentucky?
5. Are Kentucky's people, communities, and economy benefiting?

Progress on these five questions will lead to better educated Kentuckians, higher incomes and more high-value jobs, increased tax revenues, more involved citizens, a robust knowledge-based economy, less poverty, and healthier people.

This policy review and development process allows the Council to focus in more detail on specific areas identified in the Public Agenda, examine best practices in other states, review state and national data, and work with postsecondary providers and other key stakeholders to develop a well-defined, prioritized set of policy and funding proposals.

Three of the Council's policy groups – Quality and Accountability, Budget and Finance, and Research, Economic Development, and Commercialization – will take the lead in reviewing the issues, and will bring forward preliminary policy recommendations to the full Council by the end of year. Recommendations, if adopted by the Council, will help guide the development of a new postsecondary funding model, as well as other funding recommendations, new or revised Council policies, interagency and interinstitutional collaborative initiatives, and nonbudgetary legislative proposals.

Accountability and Performance

[This issue initially will be addressed by the Quality and Accountability Policy Group.]

WHY IS THIS IMPORTANT?

In 2005, the National Commission on Accountability in Higher Education released the report, *Accountability for Better Results: A National Imperative for Higher Education* that concluded the purpose of accountability in higher education is to improve institutional performance. The report stated that “Real improvement...will come when accountability in higher education is a democratic process through which shared goals are explicitly established, progress is measured, and work to improve performance is motivated and guided.”

The Commission’s report also stated that effective approaches to accountability must recognize and observe distinctive roles and responsibilities of the federal government, the states, accreditors, lay governing boards, state coordinating agencies, institutional leaders, faculty, and students in improving performance in higher education. Ultimately, in the current fiscal and political environment, directly addressing the question of “Who is responsible?” is increasingly important in reinforcing our ability to move Kentucky aggressively forward on our short-term (Public Agenda) and long-term (HB 1) goals.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

Areas related to accountability and performance that need to be addressed include: 1) the role of the Council and others responsible for these issues, 2) efficient use of resources, and 3) effective communication of accountability and performance information.

1) Is the role of the Council and others responsible for accountability and performance clearly defined and differentiated?

- Challenges:

Defining accountability and performance. Kentucky has experienced improvement in key areas of college preparation, enrollment, degrees and credentials, research, and increases in a number of quality of life indicators. In addition, the Council is nationally recognized for its Public Agenda and accountability system (Five Questions – One Mission: Better Lives for Kentucky’s People and its state- and institution-level key indicators) and its aggressive policy work, particularly in the adult education, knowledge-based innovation, and P-16. However, there continue to be questions about postsecondary accountability, resource allocation, and performance goals.

Who is responsible? HB 1 stated that the long-term goals could best be accomplished by “a comprehensive system of postsecondary education with single points of accountability...” Thus, in addition to the Council’s state-level accountability system, institutional-level accountability is particularly important in states like Kentucky where the postsecondary policy focus emphasizes strategic planning and policy leadership in the public interest. Institutions use their strategic and business plans to guide their operations and align themselves with the Public Agenda. At the same time, institutions use a wide array of other accountability tools to measure quality and performance, such as annual reports, financial reports, SACS accreditation reports and accompanying quality enhancement plans, academic program review, and other planning and assessment tools related to facilities, equal opportunity, enrollment management, student affairs, and auxiliary services. During the Council’s 2020 educational attainment discussions, alignment of performance goals and shared responsibility will be critical as we move forward with long-term planning and policy initiatives related to increased educational attainment.

Maximizing the use of the Strategic Committee on Postsecondary Education (SCOPE). HB 1 calls for SCOPE to be “a forum for the Council and the elected leadership of the Commonwealth to exchange ideas about the future of postsecondary education in Kentucky.” SCOPE also reviews the Public Agenda and implementation plan, provides an avenue for the Governor to deliver information on the financial condition of the Commonwealth and the probable funds to be allocated for postsecondary education, and a mechanism for the Council to share how such funds will be designated based on strategic priorities. SCOPE members have occasionally questioned whether the committee has realized its potential as a forum for funding and policy development. This warrants continued review and discussion by the Council and other SCOPE members.

- Current CPE initiatives:
 - Revised Public Agenda 2005-2010 and five questions
 - State and institution key indicators goal-setting and reporting
 - Pilot performance funding system
 - Annual accountability reports on Public Agenda and strategic investment funds
 - Meetings with SCOPE
 - Committee on Equal Opportunities campus visits and new diversity study
 - Quality and Accountability Policy Group activities

2) Who is responsible for the efficient use of resources?

- Challenges:

Balance between financial oversight and detailed monitoring of institutional operations. As a state coordinating agency, the Council is given the

responsibility to develop the biennial budget request on behalf of postsecondary education. But the distribution of funds received among the various objects of expenditure is an institutional responsibility. The Council must balance its roles of budget development and financial monitoring with the institutions' responsibility for day-to-day operations fiscal management. A pilot performance funding system was approved in this past budget session to provide an additional link between state resources and improved performance related to degree productivity and efficiency.

Link between state appropriations, tuition, and financial aid. The ability to link state appropriations, tuition revenue, and financial aid will play a critical role in our ability to move Kentucky forward on its 2020 goals. In this last budget session, the Council took a strategic step forward in its budget request by linking tuition increases to levels of additional state funding. Given the large investment the state makes in student financial assistance, the Council will need to take a more active role in working closely with the Kentucky Higher Education Assistance Authority to align policy initiatives and state goals for postsecondary access, participation, and student success.

Financial data collection and reporting. HB 1 fundamentally shifted the state-level postsecondary policy focus from short-term institutional needs and operations to long-term civic, economic development, and educational challenges facing the Commonwealth. Thus, the Council's Public Agenda and accountability system focus more on statewide outcomes and less on detailed institutional use of resources. This said, the Council does coordinate and track specific financial information for all public colleges and universities and generates special analyses on financial data including revenues and expenditures, instructional facility space and utilization, endowments, and strategic trust funds. However, given the increased interest in linking current revenues, expenditures, and outcomes in order to help justify additional resources, greater financial data collection and reporting is clearly being demanded.

- Current CPE initiatives:
 - Annual collection and review of institutional operating budgets
 - Annual collection and reports on strategic trust funds
 - Six-year capital plans
 - Exploring additional ways to assess financial strength of system and ways to assist institutions in becoming more productive and efficient with current resources
 - Budget and Finance Policy Group activities
 - Council's participation in WICHE's Changing Directions initiative focused on integrating financial and financing policy

3) How can the Council more effectively communicate accountability and performance information to key stakeholders?

- Challenges:

Amount and access to data. The Council collects a significant amount of accountability, performance, and financial data on institutions and the various strategic trust funds and pass-through programs. It also collects information from the detailed operating budgets submitted annually by all public institutions. Organizing these massive amounts of data is challenging given limited resources and outdated data warehousing. In addition, partially due to a lack of a standard chart of accounts for all institutions and automated mechanisms to analyze these data, there is a limit to the staff's capacity to fully utilize this information to support accountability, performance, and financial-related policy discussions.

Presentation and dissemination. The Council's accountability, performance, and financial information can at times be difficult to interpret and understand for lay audiences or those without specialized training. There also are multiple types of data resources (e.g., enrollment, degrees, credit hours, institutional base budgets, debt service, strategic trust funds, endowment match funding, Council operating and special initiatives, adult education, federal grant programs, and various pass-through programs among others) that are filtered through the agency with varying levels of accountability and reporting requirements. The Council recently initiated a new accountability process to review pass-through programs. However, there may be additional ways to restructure or standardize the accountability and reporting functions and consider new ways of presenting and disseminating information that highlight accountability, performance, and the efficient use of resources both at the state and institutional level.

- Current CPE initiatives:

- Reformatted accountability report with executive summary and overview of progress document
- County fact book
- High school feedback report and initial stages of community college feedback report on transfer students
- Minority-focused accountability report on key performance indicators
- Redesigned data web site with significant increase in data tables to highlight performance and public accountability
- Statewide data fact book to accompany annual accountability report
- Initial stages of development in Council annual report to highlight role of the Council in accountability and performance system
- More regularly scheduled discussions related to accountability and performance with key legislative and executive branch staff
- New Council policy group on accountability

WHAT CAN THE COUNCIL DO TO ADDRESS THESE ACCOUNTABILITY AND PERFORMANCE ISSUES?

Definitions and role differentiation. The Council should take the lead role in reassessing how various key stakeholders view accountability and performance in Kentucky with the goal of coming to a general understanding of role differentiation given the state's various political, organizational, and institutional governing systems and how they function.

Revisit policy levers. The Council has utilized its policy levers such as strategic trust programs, academic program review, budget recommendation and funding methodology, tuition policy, new policy formation, data collection, reporting, and higher education advocacy efforts, to varying degrees of effectiveness since reform started in 1997. The Council needs to revisit each of these levers to assess its short-term and long-term impact on moving the Public Agenda forward. It should also explore alternative strategies to incent performance.

Data and reporting. The need for significant improvements in data access and reporting remains high. Good public policy is informed public policy. It necessitates robust data and analyses and ultimately relies on information and technology resources. The Council needs to continue to aggressively push forward with initiatives to enhance its data and reporting capabilities such as the proposed Kentucky Postsecondary Education Data System (KPEDS).

Research. The Council needs to continue to search for new ways and best practices related to increasing both state and institutional level accountability and performance. Access to improved national, state, and institutional level data sets is creating a massive amount of new research related to accountability and performance. The Council needs mechanisms to systematically synthesize this information and utilize it in our own improvement efforts.

Business Plans

[This issue initially will be addressed by the Budget and Finance Policy Group.]

WHY IS THIS ISSUE IMPORTANT?

One of the six major goals of HB 1 was the creation of a seamless, integrated system of postsecondary education strategically planned and adequately funded to enhance the economic development and quality of life of all Kentuckians. In the most recent budget session, due in part to the promotion of University of Kentucky's Top 20 Business Plan, the General Assembly showed increased interest in linking institutional strategic/business plans to state funding and accountability. A major lure of drafting a business plan is that it clearly links an organization's market position with financial need and projected results, and the Council should explore the best way to move forward on this issue.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

Areas related to business plans that need to be addressed include: 1) purpose of the business plans and 2) impact on short-term and long-term funding methodology.

1) What is the purpose of the business plans?

- Challenges:

Definition and terminology. Traditionally, business plans focus on financial projections but also contain market research, competitor information, and projected revenue and budget information. In contrast, strategic plans tend to describe an organization's missions, along with supporting goals, objectives, and the allocation of resources. Given where we are in the reform process, does it make sense to use the Council's 2020 projections to stimulate additional market analyses and produce a long-term planning document that clearly outlines cost parameters for achieving the 2020 goals outlined in HB 1?

Common protocol. What are the essential elements required for a statewide long-term funding plan? What protocols, assumptions, and procedures need to be established in order to move the business plan process forward? Is there a common template that needs to be created to collect necessary cost data and information from each of the public institutions?

Communications strategy. If a statewide business plan or long-term funding plan is created, what is the best way for the Council to communicate the message to various statewide constituencies?

- Current CPE initiatives:
 - 2020 enrollment and degree projections
 - Drafting a white paper on Kentucky's postsecondary accountability system
 - Discussing the Public Agenda and accountability system with key constituents
 - Analyzing institutional annual operating budgets

2) How should the business plans be linked to the short-term and long-term funding methodology?

- Challenges:

Costing out plan. What is the best way to cost out a long-term plan like this? How complicated or straightforward should the approach be given the long-term nature of the financial projections? How are other agency costs, such as KDE's and Economic Development's contributions, considered in the business plan?

Link to biennial budget request. How will the costs derived from the state's and the various institutional business plans be used to initiate the biennial budget request for 2008-2010 and beyond? Do the long-term cost projections serve as a starting point for estimating the new biennial funding gap? How will any additional new monies be allocated? Base or fix cost adjustments? Strategic trust funds? Performance funding?

Use of current resources. Does the state need a detailed cost analysis to better understand the true costs of producing undergraduate degrees, graduate degrees, research funding, regional stewardship, etc.? In addition to the current review of annual operating budgets, does it make sense to initiate some type of uniform chart of accounts or a clear mapping of accounts to better understand how various sources of revenue are being utilized across the system?

Independent colleges and universities. Independent colleges and universities in Kentucky play a critical role in the long-term success of any statewide business plan given their history, potential capacity to enroll students, ability to produce graduates, and low cost to the state. Does it make sense to also include a business plan for the independent colleges and universities? What policies should be considered for the state to more fully benefit from this postsecondary education sector?

- Current CPE initiatives:
 - Funding policy review
 - Campus facilities study

- Drafting cost parameters based on current and projected FTE and degree production, historical growth in state appropriations, or some other means to estimate long-term postsecondary education investments.

WHAT CAN THE COUNCIL DO TO ADDRESS THIS BUSINESS PLAN ISSUE?

Research and analysis. Conduct additional research on other similar statewide initiatives to gather common elements and strategies used to convey similar long-term funding plans.

Use of resources. Gain a better understanding and commission a report highlighting what the state and the various regions receive for the \$1.3 billion annual investment in postsecondary education. Remind key stakeholders of the number of faculty and staff members employed, estimated total salary and benefits, number of graduates, economic and business development, community partnerships, applied and basic research, and direct and indirect economic impact on local communities and tax base, etc.

Communications and follow-up strategy. Equally important to the content of the plan is the Council's ability to communicate its message to the appropriate constituents and follow up on the plan details. A comprehensive communications and follow-up strategy will be needed to maximize the utility of the plan.

Linking all revenue sources. Continue to push for stronger links between state appropriations, tuition and fees, financial aid, and other funding sources by convening meetings and initiating discussion among the key partners.

Accountability. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Capital Construction and Facilities Management

[This issue initially will be addressed by the Budget and Finance Policy Group using information from the statewide facilities assessment currently underway.]

WHY IS THIS IMPORTANT?

The Public Agenda for Postsecondary and Adult Education states that “the significant investments made in postsecondary and adult education since House Bill 1 have produced impressive gains... But without firm resolve and adequate resources, our momentum will stall.” Access to high-quality teaching and research facilities is essential in the preparation and training of Kentucky’s citizens. There are limited funds available from the state for capital construction. There must be recognition of the available revenue that can be dedicated to maintaining and upgrading existing facilities while at the same time creating new education and research space.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

There are a number of areas related to capital construction that should be addressed, including construction of research space, renewal and maintenance of existing facilities, statewide capital priorities, cost implications, and institutional flexibility to issue agency bonds.

1) To provide a state-of-the-art teaching environment and space to support a nationally competitive research agenda, the state must:

- **Explore strategies for constructing more research space in order to increase quantity and quality of research and attract high-profile researchers.**
- **Raise the standard of repair for existing teaching and research facilities and upgrade or remodel current space to include new technology.**
- **Identify alternative ways to renew and expand revenue-generating facilities, including housing and athletic buildings.**
- Challenges:

Competition between research space and other capital needs for debt capacity. Kentucky must identify a funding strategy that provides adequate support for both research space and other postsecondary capital priorities.

Capital renewal repair and maintenance. Existing facilities must be maintained, renewal must be funded on an ongoing basis, and the funding process

should recognize efforts by institutions to budget for ongoing renewal of E&G facilities (fund depreciation).

Institutional flexibility to issue agency bonds. Recognizing the state's debt capacity is limited, institutions should be allowed more flexibility in terms of timing, project identification, and management of funds to address capital needs for revenue-generating facilities.

Statewide facilities condition review. A significant portion of the existing space at Kentucky's postsecondary institutions was constructed before 1980 and has never been fully renovated. The statewide assessment will identify capital renewal and maintenance needs for E&G and research space and will suggest funding strategies to help address the gap (similar to the North Carolina study).

- Current CPE initiatives:
 - State- and institution-level model that establishes capital priorities.
 - Statewide facilities assessment to establish the condition and quality of existing space, future space needs, research space needs, and a matrix of funding strategies.
 - Policy to require institutional match to access state funds designated for capital renewal, repair, and maintenance. The level of match recognizes renewal efforts by institutions.
 - CPE recommendation for a capital renewal, repair, and maintenance pool.
 - CPE recommendation that institutions be authorized to issue nonstate-supported debt to address critical needs associated with revenue-producing facilities (for example, housing and athletics).

2) What are the cost implications?

The cost of addressing capital renewal and major renovation and new education and research space will create significant pressures on the Commonwealth's general fund and debt capacity. It will require more resources, a more innovative strategy, more institutional flexibility, more support services, and more accountability.

- Challenges:

Long-term cost parameters. The statewide assessment will identify the base needs for space and renewal of existing facilities. The study will likely show a need for significant capital funding to address deferred needs due to aging physical plants and to construct the additional research and teaching space needed to meet the goals of House Bill 1.

Productivity and efficiency. Institutions must explore how best to increase utilization of facilities for instruction and for research that produces patents, commercialization enterprises, and business ventures. There also will be ongoing challenges to create ways to restructure course load and utilize technology to maximize facility capacity.

- Current CPE initiatives:
 - Funding policy review to assess the strategy for mitigating the competition for limited state debt capacity between E&G, research, and other facilities.
 - Campus facilities study to assess long-term needs of the state with the understanding that significant growth will have to occur to achieve 2020 goals.
 - Capital projects evaluation model that will help establish priorities for limited state capital construction funds.

WHAT CAN THE COUNCIL DO TO ADDRESS THESE FACILITIES ISSUES?

Long-term. Develop a policy regarding construction of research space. Also work with institutions to develop and communicate to the Governor and the General Assembly an approach to funding renewal cost for existing facilities.

2008-10 budget request. Incorporate the recommendations of the statewide facilities assessment to determine the capital request for the 2008-10 biennium.

Agency bonds. Develop and communicate to the Governor and the General Assembly a recommendation that provides institutions flexibility to issue limited amounts of debt to address the need for capital improvements for revenue-producing facilities.

Accountability. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Collaboration/Technology

[This issue initially will be addressed by the Distance Learning Advisory Committee through the Quality and Accountability Policy Group.]

WHY IS THIS IMPORTANT?

The Council's goal of "doubling the numbers" of baccalaureate degree holders from 400,000 to nearly 800,000 by 2020 to reach the national average requires increasing the productivity of Kentucky's postsecondary education institutions and increasing the accessibility of Kentucky postsecondary education offerings to nontraditional student populations. To help achieve these goals, Kentucky must identify collaborative opportunities that promote efficiencies (purchasing, systems, applications, and services), reduce duplication, and develop recommendations for collaboration regarding programmatic information as well as instructional and administrative technology needs that benefit the state and the institutions.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

1) Identify collaborative academic program opportunities that promote efficiencies.

- Challenges:

Public Health. Kentucky has high morbidity and mortality rates in cancer, cardiovascular disease, and diabetes – illnesses that with proper education and prevention interventions could be reduced substantially. The state's public health workforce is minimally trained in the public health core curricula.

Engineering. Kentucky needs engineers and engineering technologists if it hopes to improve the economy and create more economic development opportunities. In addition, not enough Kentucky high school graduates, adult students, and KCTCS transfer students are being prepared to enroll in and successfully complete science, technology, engineering, and mathematics (STEM) degree programs at Kentucky's colleges and universities.

Education Leadership. The need for primary, secondary, and adult education leaders to receive training that is relevant, current, and embedded is crucial and increasing.

- Current CPE initiatives:
 - As part of the Council's Statewide Strategy for Public Health Education and Research, UK, UofL, ECU, and WKU (institutions with public health programs), and

- the Kentucky Department for Public Health have worked in collaboration to ensure a much-needed public health-trained workforce. The initiative will expand public health workforce professional development opportunities and support the development of collaborative research efforts.
- The Statewide Engineering Strategic Plan provides joint engineering education needed for Kentuckians to excel in the knowledge economy. The strategy includes an accelerated review process for joint baccalaureate engineering programs, funding strategies, and initiatives to recruit, mentor, and place women and minorities in engineering programs. This initiative is funded by annual appropriations divided among the four engineering programs at the University of Kentucky, Western Kentucky University, University of Louisville, and Murray State University.
 - The P-16 Joint Engineering Pipeline Program gives middle and high school students access to a rigorous curriculum that will prepare them for postsecondary engineering programs. The Council is working closely with the Kentucky Department of Education to develop a cadre of 30 Project Lead The Way (PLTW) high schools over two biennia to strengthen the science, technology, engineering, and math (STEM) degree pipeline.
 - The Educational Leadership Redesign Initiative will develop a new generation of school leaders through redesigned programs that more effectively address the evolving and emerging issues of curriculum, delivery, assessment, and administration.
 - Joint and Collaborative Doctoral Degrees in Education: As a result of the educational leadership redesign initiative, as well as increased demand and need across the Commonwealth, the Council is exploring strategies for expanding access to Ed.D. degrees.
 - The Kentucky Principal Leadership Institute is an integral component of the educational leadership redesign process. House Joint Resolution 14 passed by the 2006 General Assembly directs the executive director of the Education Professional Standards Board, with the cooperation of the commissioner of the Kentucky Department of Education and the president of the Council on Postsecondary Education, to establish an interagency task force to collaborate with public and independent postsecondary education institutions for the redesign of preparation programs and the professional development of educational leaders.

2) Identify statewide consortial purchasing/licensing of technology-based instructional and administrative systems, applications, and services.

- Challenges:

Consortial purchasing/licensing. Kentucky needs technology that is robust, flexible, and based upon common standards. The degree to which Kentucky is able to shift core service products and service providers to take advantage of new, lower-cost, higher-efficiency alternatives will directly impact Kentucky's ability to innovate. Use of

common tools, acquired under the rubrics of common standards, delivered over a robust and flexible infrastructure will provide the foundation for Kentucky's progress in the implementation and integration of new learning methods and opportunities for Kentuckians. Institutions, education agencies, and state government (COT & Purchasing) need to work closely to develop and enable common, consortial purchasing.

- Current CPE initiatives:
 - Establishment of the statewide consortial BlackBoard license provides the benefits of cross-institutional and cross-agency collaboration. The long-term fiscal, operational, and instructional opportunities are significant. Consortial licensing of the BlackBoard CMS by postsecondary and K-12 will save Kentucky over \$3.3 million in postsecondary license costs alone and promises to increase content-sharing across all sectors over the four years of the agreement.
 - Since 2001, the Council has negotiated a statewide contract with the Environmental Systems Research Institute to provide Kentucky's public postsecondary institutions with access to a full complement of geographic information systems software. By committing to a single contract for all institutions, the Council has been able to facilitate providing this software at a much lower cost than any of the institutions would have been able to negotiate individually.

3) Develop recommendations for collaboration that utilize information and technology such as the P-16 shared network infrastructure and the P-16 seamless data warehouse.

- Challenges:

Shared network. The current telecommunications services to the K-12 schools and other education locations are inadequate. Access to a statewide, high-speed, affordable, educationally focused network will build upon the successes that are occurring at institutions, selected K-12 districts, and adult education centers across the state.

Data warehouses. Federal reporting mandated under *No Child Left Behind* requires KDE to track students beyond high school into postsecondary education. EPSB needs to link information about teacher training to the performance of students to identify professional development needs and needed improvement in teacher preparation programs. The Council and KDE need to track student data across the P-16 spectrum to develop a better understanding of why so many students graduate from high school but still require remediation when they enter colleges and universities.

- Current CPE initiatives:

- Creation of the Kentucky Education Network (KEN). The network will be a high-speed education-centric network. The purpose is to facilitate the development, deployment, and operation of a set of seamless P-16 applications. It will support advanced research and education applications to further Kentucky's educational agenda. It will connect every college, university, and K-12 school district in the state regardless of geographic location as well as the agencies of the Education Cabinet and their statewide locations. A universally available high-speed network will provide the ability to:
 - Connect all students with educational and research resources that are not available locally.
 - Strengthen the relationship between postsecondary, adult education, and K-12 educators.
 - Connect pre-service teachers with real world K-12 classroom learning experiences.
 - Increase the opportunities for high school students to participate in dual credit courses.
 - Connect students with the rich research and advanced instructional applications of Internet2.

WHAT CAN THE COUNCIL DO TO ADDRESS THESE COLLABORATION/TECHNOLOGY ISSUES?

Academic program collaborations.

- Identify additional opportunities for programmatic collaborations (e.g., support of the Statewide Engineering Strategy).
- Utilize the Kentucky Virtual University to explore and pilot new instructional models.
- Identify and establish incentives for faculty, staff, and institutional collaborative activities, intra-institutional, inter-institutional, and P-16. Identify and eliminate barriers for the same.
- Identify and establish incentives for applying technology to improve quality, reduce costs, and increase access. Identify and eliminate barriers for the same.

Statewide consortial purchasing/licensing.

- Resolve the procurement bottlenecks to allow for more streamlined and competitive acquisitions.
- Determine what technologies are critical and how they should be aligned and managed to enable (and reduce barriers to) collaboration.

Collaborations utilizing information and technology.

- Establish and coordinate optimum structure for postsecondary education technology leadership (between institutions, CPE, and state agencies) to create and sustain collaborative opportunities and initiatives within the postsecondary education community and between postsecondary and other potential partners. Look to existing

collaborations (Kentucky Virtual University/Library, public health, K-Core, joint budget request, etc.) for best practices.

- Promote funding of the Kentucky P-16 seamless data warehouse as an independent data repository shared by CPE, EPSB, and KDE for research assessment and accountability reporting purposes. The project will allow analyses across education agencies that today are not possible or extremely difficult to perform.

Accountability. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Educational Attainment

WHY IS THIS ISSUE IMPORTANT?

The long-term goal of HB 1 is to significantly improve the quality of life and economy for all Kentuckians. Achievement of HB 1 goals is dependent on increasing the educational attainment level of the Commonwealth to at least the national average by 2020, from 19 percent in 2000 to a projected 32 percent in 2020. To do this, Kentucky needs to double the number of baccalaureate degree holders over the next 14 years, from roughly 400,000 in 2000 to nearly 800,000 in 2020. With no changes to current production levels, Kentucky will fall short approximately 211,000 degree holders in 2020 and thus give up many of the benefits that come with increased educational attainment.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

There are a number of areas related to increasing educational attainment that need to be addressed, including: 1) interventions and change strategies and who is responsible, 2) cost implications in terms of state appropriations and other resources, 3) outreach activities to better communicate the benefits of a bachelor's degree, and 4) connecting educational and labor market opportunities.

1) What interventions and strategies will be needed to double the number of bachelor's degree holders by 2020?

The Council staff worked with a national consultant and others on a model to look at the various inputs (i.e., high school students, adult students, and transfers) and throughputs (i.e., college-going rates, retention rates, and graduation rates) needed to close the educational attainment gap and significantly increase bachelor's degree production in Kentucky.

- Challenges:

Increasing postsecondary participation and quality. The 2020 projections model suggests that we need to increase the high school college-going rate from 62 percent to 74 percent, increase the adult college participation rate from 3.6 percent to 4.5 percent, and raise the postsecondary system's graduation rate from 44 percent to 55 percent in 2020. It is estimated that to achieve degree production goals by 2020, that over 330,000 undergraduates will need to be enrolled in college, up from 168,900 in 2000. Kentucky colleges and universities will also need to award approximately 33,700 bachelor's degrees, up from 15,600 in 2000. We also will need to encourage the 550,000 working-age adults that already have some college or associate degrees to complete their postsecondary work.

Improving GED to college transitions. The 2020 projections model suggests that we need to increase the annual number of GED graduates as well as the college-going rates of these graduates. In 2005, there were a little less than 10,000 GED graduates in Kentucky and, in 2002, approximately 19 percent of GED graduates enrolled in postsecondary education within two years.

Enrolling a larger proportion of first-time students at KCTCS. Arguably the biggest systemwide change in the 2020 projections model is the suggestion of enrolling more first-time students at KCTCS and significantly increasing the number of upper-division transfers from KCTCS to the four-year institutions. This change is driven by enrollment capacity issues at the four-year public institutions. However, critical to the success of this approach will be keeping KCTCS net costs low, getting students through KCTCS in a timely manner, educating more students on the value of the bachelor's degree, greater data and information sharing among institutions, and continuing to streamline the transfer and completion process. The number of annual transfers from KCTCS to four-year institutions will need to increase from roughly 4,000 in 2004 to 15,600 in 2020 under our current scenario. Almost 50 percent of current seniors in Kentucky did not start at the institution from which they will graduate.

Raising high school graduation rates. The 2020 projections model suggests that we need to increase the high school graduation rate of ninth graders from 72 percent to 81 percent by 2020 – which would currently place Kentucky in the 75th percentile of all states. In 2004, there were approximately 57,000 ninth graders in the state and only about 40,000 seniors. The 2020 projections model requires that the number of high school graduates increases to approximately 48,000 by 2020. Critical success factors include efforts such as enhanced support services, improved teacher preparation, and increased college preparedness.

Increasing migration, economic development, and regional stewardship. Even with the changes outlined above, Kentucky will still be significantly short in terms of achieving its degree production goals. The state will need to aggressively create new jobs to keep college graduates working in Kentucky, attract college-educated, out-of-state residents, and work on other regional factors that influence quality of life and business development such as the type of degrees produced (i.e., STEM degrees). It is important that all areas of the state, all industries, and all Kentuckians receive the benefits of increased educational attainment.

- Current CPE initiatives:
 - State and institution level key indicators and goal setting processes
 - New pilot performance funding system to reward bachelor's degree production and efficiency
 - Statewide transfer study, along with work of Statewide Transfer Committee

- New 2020 advisory group with representation from the public institutions, the Association of Independent Kentucky Colleges and Universities, Kentucky Adult Education, the Kentucky Department of Education, and economic development
- Statewide policy scan to identify what policies are helping and what are hindering our progress
- Discussion with Kentucky Adult Education and performance measures
- Initiatives such as the P-16 Council, Go Higher Kentucky Web site and college access campaign, GEAR UP, the statewide mandatory placement policy, college-level learning assessments via *Measuring Up*, and the state's new mandatory ACT policy

2) What are the cost implications?

The cost of increasing Kentucky's educational attainment to the national average will be significant. It will require more resources, more faculty, more facilities, more support services, more technology, and more accountability.

- Challenges:

Long-term cost parameters. Given that we now have updated information on the level of degree production needed to achieve the national average, we now must better understand and communicate the projected long-term costs associated with achieving this goal over the next 14 years. Agreeing upon key assumptions, exploring various cost methodologies, developing a standard protocol for long-term business plan development, and agreeing on how these long-term costs are utilized in the revised funding policy and the biennial budget process will all prove challenging over the next 12 to 18 months.

Productivity, efficiency, quality, and resource reallocation. In addition to securing new resources, there will be a challenge to do more with existing resources. Kentucky's institutions must increase productivity and efficiency above their current levels and sustain this over time. In a 2005 report released by the National Center for Higher Education Management Systems (NCHEMS), Kentucky's state system ranks low in terms of overall performance relative to funding (state appropriations plus tuition and fee revenue) per FTE. Aggressive growth and degree production will place added pressure on academic quality.

Facilities. The Council's current campus facilities study will provide valuable information as we move forward in our efforts to achieve the 2020 goals. Additional residence halls, academic buildings, administrative and support buildings, and lab buildings will all be needed. There will be ongoing challenges in this area related to the state's ability to take on new debt, institutional bonding authority, and creative ways to restructure courseload and utilize technology to maximize capacity.

- Current CPE initiatives:
 - Funding policy review
 - Statewide campus facilities study
 - 2020 Projections Advisory Group made up of representatives from institutions, KDE, Kentucky Adult Education, and economic development
 - Pilot performance funding system
 - Revised KYVU mission and strategic plan
 - New tuition policy and participation in WICHE project to better align state appropriations, tuition policy, and financial aid

3) What outreach activities are needed to better communicate the benefits of a bachelor's degree?

Doubling our numbers will benefit all Kentuckians. Many Kentuckians already believe this, but many do not. Aggressive and unparalleled outreach is critical to Kentucky's educational attainment success. The issue is how can we more effectively communicate the link between an educated citizenry, economic prosperity, and quality of life and instill it into the lifeblood of Kentucky's culture and future.

- Challenges:

Personal and local level. Many individuals and local communities still do not understand, embrace, and promote the benefits of increased educational attainment. Kentuckians must realize this simple truth – a bachelor's degree holder on average earns \$1 million more than a high school graduate over a lifetime. In 2004, Kentucky was ranked 48th in the percentage of adults with a bachelor's degree or higher (19 percent versus 27 percent nationally). In 1990, Kentucky had only three counties (Oldham, Franklin, and Fayette) above the national average in educational attainment and only five (Oldham, Jefferson, Woodford, Fayette, and Warren) in 2000. The challenge is to dramatically increase this number by 2010.

Economics. If we reach the national average in educational attainment by 2020, we can expect a cumulative increase of \$5.3 billion in state revenue and \$71 billion in personal income, according to the Kentucky Long-Term Policy Research Center. The challenge is to better communicate the costs and benefits of postsecondary education to the state, private employers, non-profits, and local governments.

Key partners. As our 2020 projections model reinforces, postsecondary and adult education cannot increase educational attainment by ourselves. The challenge is to reconnect with our key partners across the state in a coordinated way to promote increasing educational attainment at all levels.

- Current CPE initiatives:
 - Go Higher Kentucky Web site, collaboration with KHEAA, and SREB Go Alliance
 - College access campaign, GEAR UP campaign, and KYAE marketing
 - Southern Governors' Association Technical Assistance Grant
 - University Coordinated Advising Network (UCAN)

4) How will new educational opportunities connect and respond to labor market demands and growth trends?

If Kentucky did reach its educational attainment goal of achieving the national average by 2020, the state will need more high-skilled, high-paying jobs.

- Challenges:

Institutional responsiveness. At the state level, beyond general academic program review, the Council currently has very few if any policy levers to provide incentives for new educational opportunities related to labor market trends and potential shortages. There are a small number of loan forgiveness programs associated with teaching and health care in rural communities, but there are very few incentives for institutions to respond to statewide interest in dramatically increasing the number of STEM degrees other than improvement on the key performance indicator. A recent report commissioned by the Kentucky Science and Technology Corporation concluded that without a dramatic shift in labor market growth opportunities Kentucky would reach the national average in per capita income in roughly 150 years!

Collaboration. Unprecedented collaboration among many statewide partners, including CPE, KYAE, KCTCS, economic development, workforce development, Chamber of Commerce, and private industry is required to more strategically link degree production to high-value, knowledge-based job opportunities. Rekindling the Kentucky Innovation Commission established under the Kentucky Innovation Act in 2000 may satisfy an unmet need in this area. It is obvious that Kentucky also needs to solicit headquarters of major corporations, research and development centers, and other knowledge-based high-growth industries versus its traditional industries in order to create the numbers and types of jobs required by our 2020 projections.

WHAT CAN THE COUNCIL DO TO ADDRESS THESE EDUCATIONAL ATTAINMENT ISSUES?

Long-term planning. Develop a long-term educational attainment plan that could include a statewide market analysis of enrollment, degrees, and labor trends, interventions and strategies for operational change, information from the campus facilities study, long-term cost parameters, and an outreach plan.

Goal alignment. Work with KDE, Kentucky Adult Education, economic development, KHEAA, and other entities around the state to align our long-term educational goals and strategies.

Productivity and efficiency. Set goals for improving productivity and efficiency. Convene institutions to discuss what they are already doing in these areas and promote the use of best practices. Reconsider how tuition policy, capital recommendations, strategic recommendations, and other funding-related activities can be linked to degree production and labor market trends in the STEM fields.

Outreach. Advocate for stronger outreach activities from all directions and from all partners. New outreach tools need to be developed to communicate the message to the public and to government, business, and community leaders.

Research. Establish a research agenda and commission additional studies and information-gathering on issues such as promoting educational attainment, including best practices in other states, best use of KCTCS in advancing bachelor's degree production in the state, best use of financial aid in promoting degree attainment, migration, employer satisfaction and needs, alumni, link among higher education, labor markets, and per capita income.

Accountability. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Equal Educational Opportunity

[This issue initially will be addressed by the Committee on Equal Opportunities' diversity study.]

WHY IS THIS ISSUE IMPORTANT?

In 1979, the Office for Civil Rights (OCR) in the U. S. Department of Education found that the Commonwealth of Kentucky, in violation of Title VI of the Civil Rights Act of 1964, has failed to eliminate the vestiges of its former *de jure* racially dual system of public higher education. Kentucky was asked to submit to the OCR a statewide plan that would fully desegregate the Kentucky system of higher education. Kentucky has completed two iterations of planning under the OCR, the 1982 Higher Education Desegregation Plan and the 1999 Partnership Agreement. After completing both plans, the OCR continues to exercise oversight of the Commonwealth's efforts.

The long-term goal of HB 1 is to significantly improve the quality of life and economy for all Kentuckians. Achievement of HB 1 goals is dependent on increasing the educational attainment level of the Commonwealth to at least the national average by 2020. To do this, Kentucky needs to reinforce actions that lead to equal opportunity and access within the system. Kentucky has made some progress, but the process is not yet complete. Without continued focus and effort, Kentucky will fall significantly short of this goal and give up many of the benefits that come with it.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

There are a number of strategies related to increasing the level of diversity in enrollment and employment that should be addressed, including maintaining a strong accountability system, developing a more inclusive diversity planning process, committing resources to develop the appropriate pipelines, and developing outreach activities to better communicate access and opportunity.

- 1) Strategies are needed to ensure continued progress toward increasing the diversity of the student body and employment among administrators, faculty, and other professionals. The Council, on behalf of the public postsecondary institutions, issued a request for proposals to identify a firm to design and implement a statewide diversity study. The study will examine the level of planning and strategies needed to ensure access and success of ethnic minorities in Kentucky's system of postsecondary education.**

- Challenges:

Gaining release from the OCR remedial plan. The Council's 2020 projections suggest that a significant increase in overall college participation is required if educational attainment in Kentucky is to reach the national average by 2020. Kentucky operates under a remedial planning process that is overseen by the federal government. To impact the lives of all citizens, Kentucky needs to be released from the OCR remedial plan and develop a more encompassing diversity plan that ensures all citizens have access to and can be successful in postsecondary education.

Defining diversity planning for postsecondary education. Recent actions by the U. S. Supreme Court established new standards for determining the need for diversity planning or the use of race as a factor in diversity planning. The statewide study will establish a unique definition of diversity, a compelling governmental interest, a narrowly tailored diversity planning concept, the appropriate duration of a diversity plan, appropriate characteristics of a diversity plan, and the success factors and rates for minority students in the Kentucky postsecondary education system.

Statewide diversity study. The study will assist the state in developing policy, addressing statewide programs to achieve greater diversity, and developing alternative systems of diversity attainment. It also will identify the appropriate characteristics of a diversity plan, analyze the impact of diversity in the K-12 system on postsecondary, identify the racial and ethnic groups that should be included in a Kentucky plan, relate diversity to economic and civic activity, connect diversity to the Public Agenda and institutional missions, and identify the ideal level of diversity for postsecondary institutions.

- Current CPE initiatives:

- Statewide plan for equal opportunities with objectives for each institution based on the key market area of an institution.
- Committee on Equal Opportunities (CEO) to oversee implementation of the plan and evaluate institutional progress toward achieving its objectives.
- An evaluation system that objectively measures and rewards institutional progress by allowing implementation of new degree programs without input by the Council's Committee on Equal Opportunities.
- Partnership with OCR to identify the remaining actions necessary to bring Kentucky into compliance with Title VI of the 1964 Civil Rights Act.
- Equal Educational Opportunity (EEO) advisory group with representation from each public institution to review and advise the Council on concerns related to equal opportunity planning and diversity.
- Statewide diversity study to help define the next phase of equal opportunity planning once Kentucky is released from oversight by the OCR.

- Middle school program to strengthen the pipeline of prepared African American students seeking to enter college.
- Initiative to increase the pipeline of individuals with terminal degree credentials required to fill positions as faculty, administrators, and other professionals at public colleges and universities.

2) What are the cost implications?

To increase Kentucky's educational attainment to the national average and to ensure that all citizens have an opportunity to participate will require more resources, more faculty, more administrators, more targeted support services, more collaboration with P-12, and more accountability.

- Challenges:

Long-term costs. The statewide diversity study will identify strategies and programs that have worked in other states that will benefit Kentucky. Establishing a common approach to identify students and provide the necessary support over their college career will increase the retention and degree attainment of ethnic minority students.

Diversity and the campus environment. In addition to broadening the focus of equal opportunity from African Americans to all underrepresented minority groups in Kentucky, there also is a challenge to do more to maintain the diversity that currently exists. Kentucky must sustain the level of support for African Americans while expanding the resources available to attract other ethnic minorities.

- Current CPE initiatives:
 - CEO campus visits to discuss support programs and campus climate.
 - Institutional campus environment teams that constantly test the campus climate through focus group discussions, open meetings, and interface with the president.
 - Annual evaluations of activities of the campus environment team and evaluation of student experiences with campus-based law enforcement.

3) What outreach activities are needed to better communicate the benefits of diversity?

Increased diversity will benefit all Kentuckians and the Kentucky economy. Many ethnic minority Kentuckians already participate in postsecondary education, but many more still do not. Aggressive collaboration with P-12 regarding preparation, outreach, and campus-based support programs will be critical in broadening the level of participation and success by ethnic populations in postsecondary education.

- Challenges:

State, campus, and local level. Statewide policy must recognize that for Kentucky to compete successfully in a global economic setting all of its citizens must have an opportunity to participate and succeed in the postsecondary system. This means that campuses must create and maintain a hospitable environment and infuse campus policies and practices with that value. Kentucky must identify the commonly cited obstacles to ethnic minorities to attain degrees, create and implement intervention measures, and dramatically increase the success of ethnic minorities in college.

Key partners. To successfully engage and increase the pipeline of prepared ethnic minority students entering college and receiving degrees, there must be collaboration across P-16, including the OCR, the Governor's office, the General Assembly, the Kentucky Department of Education, Kentucky Adult Education, economic development agencies, institutions, and local communities.

- Current CPE initiatives:
 - The Kentucky Plan for Equal Opportunities
 - Partnership with OCR
 - CPE Committee on Equal Opportunities
 - Southern Regional Education Board Compact for Faculty Diversity
 - Governor's Minority Student College Preparation Program
 - Proficient Juniors and Seniors Annual Conference
 - Institutional Campus Environment Teams
 - Statewide Diversity Study Initiative

WHAT CAN THE COUNCIL DO TO ADDRESS THESE EQUAL EDUCATIONAL OPPORTUNITY ISSUES?

Long-term planning. Satisfy the remaining commitments of the partnership and gain release from oversight by the OCR. Kentucky must then develop and aggressively implement a statewide diversity plan with strong accountability measures.

Embrace and advocate diversity. Work with institutional boards to inculcate a policy of inclusiveness into the fabric of the institution.

Accountability, productivity, and efficiency. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Establish aggressive objectives for increasing diversity of students, administrators, faculty, and other professionals. More closely link strategic funding recommendations, new academic programs, and degree productivity to the accountability system.

Outreach. Following the completion of the statewide diversity study, advocate for stronger outreach activities and programs to engage the local communities and ethnic groups in the diversity planning for postsecondary education.

Nonresident Students

[This issue initially will be addressed by the Budget and Finance Policy Group.]

WHY IS THIS ISSUE IMPORTANT?

In fall 2005, there were 24,300 nonresident students enrolled in Kentucky public institutions representing approximately 20 percent of total enrollment. As the Council continues to align its policies to focus on the achievement of the goals of House Bill 1 and the Public Agenda, it is important to better understand the benefits and the associated costs of enrolling nonresident students and how policies related to nonresident students affect the success of Kentucky in achieving these goals.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

The Council must identify the role nonresident students play in achieving the goals of the Public Agenda and ensure that the policy and funding structures in place are appropriate and effective. Current Council policies related to nonresident students include the tuition policy, the base funding model, and tuition reciprocity agreements. Aligning these and other policies with the goals of reform will help ensure the best use of scarce state resources.

1) What are the contributions in achieving the goals of House Bill 1 and the Public Agenda?

- Challenges:

Migration. How many nonresident students remain in Kentucky after graduation and contribute to the educational attainment of the state?

Institutional quality. How do nonresident students contribute to institutional quality? Does their enrollment improve an institution's graduation rates, entrance exam scores, and scoring on certification and graduate placement exams?

Economic impact. Do nonresident students have a positive economic impact on the community and region? For example, to what extent do these students contribute to the tax base of the state and locale while enrolled? To what extent do local businesses benefit from the sale of goods and services to nonresident students?

Social benefits. What are the social benefits associated with the enrollment of nonresident students? For example, in what ways do these students contribute to campus diversity and volunteerism?

- Current CPE initiatives:
 - Student migration study
 - National Survey of Student Engagement
 - Ongoing analysis of student demographic trends through the Council's comprehensive database.

2) What are the finance policies related to nonresident students?

- Challenges:

Level of state subsidy. What is the state educational subsidy per student? Should nonresident students be subsidized at the same rate as resident students? If not, what is the appropriate level of subsidization of nonresident students? A part of this analysis would explore pricing, direct state support of institutions, and financial aid/scholarships for nonresident students.

Reciprocity agreements. How do statewide reciprocity agreements affect access for Kentucky students? Are the benefits in balance with the costs to the state?

- Current CPE initiatives:
 - CPE tuition policy. Current policy states that nonresidents must be charged at least 1.75 times the resident rate. Some institutions were granted exceptions to this policy and are allowed to charge less to targeted populations of nonresident students.
 - Tuition reciprocity. Institutions that choose to participate in tuition reciprocity agreements are required to offer reduced rates for students from certain geographic areas outside the state. In return, Kentucky residents may attend out-of-state institutions at reduced rates. Currently, 4,900 of the 24,300 nonresident students in Kentucky attend under tuition reciprocity. Tuition reciprocity agreements are governed by policies that require relative balance in the number of students exchanged and the amount of tuition waived by each state. The policies are reviewed on a regular basis.
 - Base funding model. Nonresident tuition rates have an impact on the base funding needs of institutions and, consequently, the state funds requested for each institution. The benchmark funding model calculates base funding needs on total operating dollars to the institution (tuition plus state appropriations). Therefore, as student revenue increases (resident students and, at a higher rate, nonresident students), fewer general fund dollars are needed to maximize the total public funds objective, and vice versa.

WHAT CAN THE COUNCIL DO TO ADDRESS THESE NONRESIDENT STUDENT ISSUES?

Research and analysis. Conduct a thorough analysis of each policy question listed above as well as current and past Council policies and best practices in other states.

Stakeholder communications. Convene institutional representatives, lawmakers, and other higher education stakeholders to engage in developing statewide policies in practices related to nonresident students.

Student financial aid. Explore with KHEAA, institutions, legislators, and other higher education stakeholders state-level student financial aid programs and policies to encourage nonresident students to complete their programs and stay in the state after graduation.

Accountability. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Science, Technology, Engineering, and Mathematics (STEM) P-20 Pipeline Initiative

[This issue initially will be addressed by the Research, Economic Development, and Commercialization Policy Group.]

WHY IS THIS IMPORTANT?

The STEM disciplines (science, technology, engineering, and mathematics) are essential if Kentucky is to develop the talentforce that drives knowledge economy jobs. STEM disciplines provide the foundation for future advancements in commercialization and innovation. At the national level, Congress recently approved \$790 million in Academic Competitiveness and SMART Grants to encourage rigorous course taking in high school, and support undergraduate students who major in math, science, or critical languages. At the state level, more needs to be done to strengthen the STEM pipeline and encourage a greater number of postsecondary graduates in STEM-related fields.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

A statewide STEM initiative must feature collaboration, leadership, and action and assessment.

1) Collaborative action by all key education, government, and business stakeholders.

- Challenges:

Curriculum alignment. Despite some notable progress in K-20 curricular alignment, much work remains to be done to better align high school programs and college expectations. The recent KDE approval of a more rigorous high school curriculum adds urgency to this task.

Student preparation. Fifty-four (54) percent of students entering certificate and degree programs at Kentucky's public postsecondary institutions in 2002 were underprepared for college-level coursework in mathematics, English, or reading. Forty-one (41) percent were underprepared in mathematics, and 27 percent were underprepared in English. Eighty (80) percent of GED graduates and 80 percent of students 25+ were underprepared.

Teacher professional development. STEM-related fields are dynamic, and they evolve as new discoveries are made and research challenges established assumptions.

Teachers must have ready access to quality, on-going professional development in order to stay current in their fields and teach at the highest levels.

Teacher preparation. Professional opinions differ regarding teacher preparation models. However, in the areas of mathematics and science, it is imperative that teachers have deep understanding of content. By the fourth and fifth grades (and beyond), students are introduced to increasingly complex mathematical and scientific material that require educators have a mastery of STEM-related content. In addition, the classroom teacher's enthusiasm for mathematics and science has been found to influence a child's interest in these subject areas.

- Current CPE initiatives:
 - Kentucky Early Mathematics Testing Program
 - Monitoring ACT scores, AP participation, and GED attainment
 - Production of the biennial High School Feedback Report
 - Publication of the Kentucky Postsecondary Education County Fact Sheets
 - Project Lead the Way schools to foster the STEM pipeline
 - P-16 councils to address these issues at the local level

2) Strong leadership necessary in convening appropriate stakeholders to develop an action plan to address this issue.

- Challenges:

Diverse stakeholders. Until recently, the various state-level education stakeholders were not organized under one administrative structure. Currently, CPE, the Kentucky Department of Education, and the Education Professional Standards Board are organized under the Secretary of the Education Cabinet to facilitate collaboration. CPE has provided leadership in working to create the statewide P-16 Council, an entity representing K-12, postsecondary education, Kentucky Adult Education, and the local community. This group has significantly advanced a wide range of issues that impact education across all sectors of the P-16 continuum. In order to fully address pipeline and talentforce issues related to STEM, the business community, workforce development professionals, economic development leaders, campus and K-12 leaders, and adult education providers should be convened as a group.

Faculty development. Faculty within the STEM disciplines and within teacher education departments and schools require specific support and encouragement in their efforts to jointly address the national crisis in science and mathematics education and professional practice.

Faculty rewards/incentives. Currently faculty development/work plans do not specifically include a separate category that recognizes productivity within the area of commercialization/entrepreneurship. Faculty who are motivated to develop commercialization enterprises must do so in addition to the institutional expectations for the traditional teaching, scholarship, and service parameters for their department/discipline.

- Current CPE initiatives:
 - CPE subcontracts with the Kentucky Science and Technology Corporation to administer the federal SBIR/STTP programs to provide preliminary (Phase One) and secondary (Phase Two) funding for faculty research and early commercialization.
 - The Council created the Research, Economic Development, and Commercialization Policy Group to begin to address the various issues associated with the research/commercialization process.
 - CPE subcontracts with KSTC to administer the Innovation and Commercialization Centers (ICCs) to assist institutions and regions to create innovative “spin-off” companies and enterprises and to support entrepreneurial activities.
 - CPE provided leadership in creating the statewide P-16 Council.
 - KYVU has developed STEM courses in collaboration with higher education institutions.
 - CPE monitors academic degree production in the STEM disciplines.
 - Project Lead the Way Engineering Pipeline Project.
 - Participation in the American Diploma Project and GEAR UP.

3) Support by policymakers for the STEM disciplines and exploration of ways to encourage faculty and student achievements in these areas. They must also assess progress in STEM achievement across the state.

- Challenges:

Global, state, and regional competition. Other states, regions of the U.S., and countries are aggressively pursuing attainment within the STEM disciplines. A new term “Chindia” has been coined to describe the regional combined efforts of China and India to advance knowledge economy opportunities through advanced graduate education in the STEM disciplines. Currently one university in India is graduating more Ph.D.s in engineering annually than all of the doctoral engineering programs in the United States.

Fiscal constraints. Budgetary constraints impact the advancement of an action agenda in this area.

Communication. The CPE tracks generic data regarding the STEM disciplines. Thought needs to be given regarding the best venue for publicizing Kentucky's current achievement and aspirational goals for the STEM disciplines.

- Current CPE initiatives:
 - Funding of Project Lead the Way schools collaborating with postsecondary institutions.

WHAT CAN THE COUNCIL DO TO ADDRESS THESE STEM ISSUES?

Explore strategies to support and enhance Kentucky's P-20 STEM pipeline and disciplines, including the creation of a STEM advisory council to include state leaders in education, government, and business; a statewide K-20 action plan to enhance Kentucky's performance in this sector; and a more robust STEM accountability system with published annual data and analysis of improvements and challenges.

Incentive Funding. Develop a statewide partnership among educational agencies and institutions to pursue incentive funding to increase Kentucky's performance within the STEM disciplines and promote the leveraging of available federal and private funding.

Equity Access. Consider best practices in other states, such as the Meyerhoff Scholars Program at the University of Maryland Baltimore County. Designed to remake science education, the program has been highly successful in identifying and nourishing a cohort of scientists and scientists-to-be. In particular, the Meyerhoff program has enabled minority students to excel as scientists through a program that demystifies science and motivates students to graduate studies in the STEM disciplines.

Collaboration. Closer collaboration with K-12 to ensure adequate counseling and assessment of student achievement to recognize and encourage students within the STEM disciplines.

Accountability. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Statewide Translational Research and Economic Development

[This issue initially will be addressed by the Research, Economic Development, and Commercialization Policy Group.]

WHY IS THIS ISSUE IMPORTANT?

Question 5 of the Public Agenda states “Are Kentucky’s people, communities, and economy benefiting?” Education is the primary driver of economic development in Kentucky, and increases in the level of educational attainment would have a significant positive impact on economic growth and the quality of life for Kentucky citizens. In order to creating and sustaining a “talentforce” within Kentucky, the state must encourage and provide incentives for research and innovation within its postsecondary institutions. Research and innovation have the potential to directly impact commercialization ventures resulting in spin-off companies and the creation of economic development clusters.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

In order to encourage research, commercialization and entrepreneurial activity within Kentucky’s universities, the Council must address: 1) the quality and quantity of faculty research; 2) the assistance/expertise of faculty and institutions to foster communication activities in the state; 3) competitive intellectual property and commercialization incentives; and 4) the capacity of research facilities to attract and keep the best researcher in the state.

1) The quality and quantity of faculty research.

- Challenges:

Assessment/documentation. Currently no central database is kept regarding Kentucky’s progress in this area. Efforts to assess the commercialization potential of existing research are fragmented and do not reflect a statewide policy or procedures.

Institutional and discipline-specific research expectations. Variability among institutions and across academic disciplines is problematic with respect to assessment/ documentation of comparative progress.

Federal guidelines and funding. States that have been highly successful in attracting consistent federal funding to their higher education institutions have aligned their institutional research priorities with the targeted federal research priorities. (The exception is California where the state designated \$3 billion for stem cell research at a

time when the federal government was prohibiting certain types of funding for stem cell research.)

- Current CPE initiatives:
 - A centralized, interactive research database template was created in 2004/05 through a contract with an external consultant, but funding never materialized to support this initiative.
 - CPE has supported the expansion of faculty research through regular meetings with the institutions' chief academic officers and a variety of faculty development conferences.
 - CPE subcontracts several faculty research development initiatives through the Kentucky Science and Technology Corporation (KSTC).
 - CPE administers the "Bucks for Brains" Endowment Match and Research Challenge Programs to enhance faculty research within Kentucky's universities.
 - Among CPE's highest priorities for capital construction is securing more research space at the two research institutions.

2) The assistance/expertise of faculty and institutions to foster commercialization activities in the state.

- Challenges:

Depth of commercialization expertise within the state. Kentucky should enhance commercialization expertise within the University of Kentucky and the University of Louisville. Additional "pooled" expertise (i.e., intellectual property, regulatory, and business development expertise) should be made available to other universities within the state.

Faculty rewards/incentives. Historically faculty development/work plans do not typically include a category that recognizes productivity within the area of commercialization/entrepreneurship. Faculty who are motivated to develop commercialization enterprises must do so in addition to the institutional expectations for the traditional teaching, scholarship, and service parameters for their department/discipline.

- Current CPE initiatives:
 - CPE subcontracts with KSTC to administer the federal Small Business Innovation Research (SBIR) programs to provide preliminary (Phase One) and secondary (Phase Two) funding for faculty research and early commercialization.
 - Sessions at the annual trusteeship conference and faculty development conference have begun to address this topic.

- The Council created the Research, Economic Development, and Commercialization Policy Group to begin to address the various issues associated with the research/commercialization process.
- CPE subcontracts with KSTC to administer the Innovation and Commercialization Centers (ICCs) to assist institutions and regions to create innovative “spin-off” companies and enterprises.

3) Competitive intellectual property and commercialization incentives.

- Challenges:

Global, state, and regional competition. Despite significant investments by Kentucky in the area of research and commercialization, other states, regions of the U.S., and countries also are aggressively investing in this type of activity.

- In July 2004, Iowa’s Department of Economic Development released the “Iowa’s Bioscience Pathway for Development” report, calling for over \$170 million in state-financed research facilities and equipment.
- In 2004, the South Carolina state legislature invested \$250 million in research facilities.
- In November 2004, a plan was announced to spend \$750 million for bioscience research at the University of Wisconsin and several hospitals.
- Ohio invested \$18.3 million in fiscal year 2004 to increase and improve basic research activity and output in the state’s four-year universities.

University autonomy in establishing policies and practices. Most Kentucky public institutions now have well-defined policies and procedures in place. Kentucky must ensure that any new “statewide” intellectual property and commercialization strategies do not have a negative effect on existing faculty-institutional agreements.

Collaboration intent of HB1. House Bill 1 calls for collaborative academic/research ventures between and among institutions. CPE has encouraged this approach, but more needs to be done to maximize resources and pool talent through collaborative activities.

- Current CPE initiatives:
 - The Kentucky Science and Technology Corporation administers on behalf of Kentucky and the CPE a variety of research and commercialization programs including Kentucky’s Small Business Innovation Research and STTP programs.

4) The capacity of research facilities to attract (and keep) the best and brightest researchers to the state.

- Challenges:

Expectations of “Bucks for Brains” professors. Many of the distinguished STEM (science, technology, engineering, and mathematics) and medical faculty recruited to Kentucky through the Bucks for Brains Endowment Match Program report that existing university lab space is inadequate (size of space and equipment) for their research activities.

Adequate funding. Sufficient funding to create adequate levels of research space is a constant challenge.

- Current CPE initiatives:
 - CPE administers the Physical Facilities Trust Fund, which includes capital renewal and maintenance, education and general projects, research, and postsecondary education centers.
 - CPE’s budget development process includes the evaluation and preparation of a prioritized university capital projects recommendation list forwarded to the Governor for inclusion in his/her biennial budget request.
 - CPE currently is conducting a statewide facilities condition assessment study which includes an assessment of existing research space as well as an assessment of projected needs.

WHAT CAN THE COUNCIL DO TO ADDRESS THESE RESEARCH AND ECONOMIC DEVELOPMENT ISSUES?

Stakeholder communications. Convene the research, technology transfer, and commercialization professionals from the universities to actively engage in developing appropriate and competitive statewide policies and practices.

Awards and recognition. Develop a state-level program to recognize outstanding university research.

Research Challenge Trust Fund. Evaluate and document the impact of the Research Challenge Trust Fund on faculty productivity, sponsored and federally funded research, SBIR awards, patents and licenses generated, commercialization activity, and industry clusters.

Collaboration. Encourage collaborative efforts between and among higher education institutions and between and among state agencies (Education, Commerce, and Economic Development Cabinets) to enhance Kentucky’s economic competitiveness.

Workforce/talentforce development. Facilitate the alignment of educational preparation for the jobs of the future within Kentucky. Plan strategically to ensure that a

pipeline of STEM and related disciplines flourishes in order to create knowledge economy jobs and ventures.

Financing research facilities. Review policies related to funding of renovated, new, or expanded research space.

Comprehensive universities. Explore the role of the comprehensive universities in developing and expanding their applied research agendas.

Accountability. Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Student Preparation

[This issue initially will be addressed by the Quality and Accountability Policy Group.]

WHY IS THIS ISSUE IMPORTANT?

The Council on Postsecondary Education's goal of "doubling the numbers" of baccalaureate degree holders from 400,000 to nearly 800,000 by 2020 to reach the national average requires:

- Increasing the number and rate of students graduating from high school.
- Increasing postsecondary enrollment of traditional high school graduates and adult GED-earners and returning students.
- Increasing the number and rate of postsecondary baccalaureate degree completers.

Increasing the number of Kentuckians who are prepared for postsecondary education will help double the number of degree holders and reduce the costs of producing graduates.

WHAT ARE THE AREAS THE COUNCIL MUST ADDRESS?

In order to improve the preparation levels of students attending Kentucky's postsecondary institutions, 1) the college readiness of recent high school graduates and adult students must improve, 2) students in postsecondary developmental education must succeed at higher levels, and 3) the quality and quantity of classroom and adult educators must increase.

1) College readiness of both recent high school graduates and adult students

- Challenges

Remediation. Fifty-four (54) percent of students entering certificate and degree programs at Kentucky's public postsecondary institutions in 2002 were underprepared for college-level coursework in mathematics, English, or reading. Forty-one (41) percent were underprepared in mathematics, and 27 percent were underprepared in English. Eighty (80) percent of GED graduates and 80 percent of students 25+ were underprepared.

Demography. Even if all ninth graders graduate from high school, there still will not be enough college students to double the numbers of baccalaureate degree holders by 2020. Recent high school graduates comprised just 63 percent of the incoming freshman class of 2002.

Current literacy levels. Forty-two (42) percent of Kentucky adults are at basic and below basic prose literacy levels. More than 18 percent of Kentuckians 25 and older do not have a high school credential.

Equity of access. African American, adult students, and GED graduates were the least prepared for college, with 77.5 percent, 80 percent, and 80 percent respectively scoring below the systemwide standards on the ACT.

- Current CPE initiatives:
 - Monitoring ACT scores, advanced placement participation, preparation levels, ninth graders' "chance for college," and GED attainment
 - Participation in the American Diploma Project
 - Administration of the Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) grants
 - Development of the Statewide Postsecondary Placement Policy
 - Revision of adult education curriculum to align with ADP benchmarks in English and mathematics
 - Production of the biennial High School Feedback Report
 - Implementation of Project Lead the Way
 - Kentucky Early Mathematics Testing Program
 - Go Higher Kentucky college-going Web portal
 - Go Higher campaign to increase college and baccalaureate aspiration
 - KEES policy work group

2) Postsecondary developmental education

- Challenges:

Continuing need for developmental education. Achieving House Bill 1's 2020 goals requires increasing recruitment and admission of first-generation college-goers – both recent high school graduates and nontraditional adult students – who are more likely to be underprepared for postsecondary study.

Improvement in developmental student outcomes. Despite annual expenditures of \$25 million on developmental education in postsecondary education, Kentucky's under-prepared students are twice as likely to drop out by the sophomore year as prepared students (38.8 percent compared to 19.5 percent). Nationally, students who withdrew from courses or repeated more than 20 percent of their courses in the first year decreased their probability of degree attainment by one-half (Adelman, C. 2006).

Equal educational opportunity. To increase college completion of minority students, students from low-income families, and adult students who have lower-than-average persistence and degree attainment rates, Kentucky's postsecondary institutions

will need to develop more effective developmental and academic support services and address barriers such as transportation, childcare, financial aid, and flexible locations and schedules that affect adult enrollment and persistence.

- Current CPE initiatives:
 - Task Force on Developmental Education
 - Committee on Equal Opportunities Diversity Report
 - Mandatory Placement Policy Report
 - Developmental Education Conference
 - Action Agenda Funds

3) Educator quality

- Challenges:

Supply and quality of classroom instructors. Raising high school graduation requirements to provide a rigorous postsecondary preparatory curriculum will require increased numbers of teachers prepared to teach in the STEM disciplines and foreign languages. Appropriate measures of educator quality should be selected to measure progress and provide national comparisons.

Supply and quality of adult educators. Eighty-nine percent of all contracted adult education instructors have at least a baccalaureate degree, although not necessarily in the area in which they are teaching (AERIN System, June 26, 2006). Other teacher preparation challenges include too few instructors with experience teaching adults. Developing a specific adult education teacher certification will require commensurate salaries and benefits.

Professional development. District and school leaders, as well as state education agencies, are demanding creation of multiple professional development pathways appropriate for educators throughout their careers.

Accountability of teacher preparation/professional development programs. Education policy leaders are calling for a data system that connects teacher preparation and professional development programs to student achievement gains.

- Current CPE initiatives:
 - Annual Teacher Quality Summits convening policy makers and arts and science and education deans and faculty from public and independent institutions to improve the quality of teacher preparation and professional development provided by Kentucky postsecondary institutions.

- Improving Educator Quality grants focused on teacher professional development in STEM fields, foreign languages, and leadership development.
- Collaboration with the EPSB staff to revise rank change and master's degree programs for teachers.
- Collaboration with EPSB and the Kentucky Department of Education staff and others to redesign educational leadership programs.
- Principal professional development institute funded for 2007-08.
- Exploration of adult education instructor certification and upgrading of instructor and instructor's aides minimum requirements.
- Examination of adult education professional development opportunities.

WHAT CAN THE COUNCIL DO TO ADDRESS THESE STUDENT PREPARATION ISSUES?

Mission definition. Develop policies better defining the role of different sectors of postsecondary education in delivering remedial/developmental education. The following issues should inform those policy discussions:

- Though recent estimates place the annual cost of developmental education in Kentucky at \$25 million, at the present time there is no analysis that breaks down the cost by type of institution tied to student success rates that would clearly show where developmental education is most efficiently delivered.
- KCTCS already has high enrollment rates of underprepared students compared to universities (76 percent overall compared with 39 percent of students entering four-year institutions).
- Nationally, just 29 percent of students beginning in a community college system transfer to any four-year institution within six years (NCES, 2003). Kentucky's transfer rates generally reflect national averages.

Accountability.

- Monitor and set goals for institutions with respect to:
 - Degree attainment rates of all levels of underprepared students.
 - Degree attainment rates of minority, low-income, and adult students.
 - Transfer rates of underprepared students.
 - Establish goals for the production of teachers, especially in high-need fields based on regional needs.
 - Production of adult education instructors.
- Provide a more refined estimate of the annual cost of remediation in Kentucky.
- Set specific goals for improving developmental education.
- Identify and consult with the statewide partners responsible for taking the lead on addressing each policy issue. Work with these partners to align statewide goals and develop collaborative efforts to move issues and the Public Agenda forward.

Incentive Funding. Evaluate the cost/benefit of providing incentive funding to encourage increased degree attainment.

Task force recommendations. Review and, if appropriate, implement recommendations of 1) the Task Force on Developmental Education created by the Quality and Accountability Policy Group (anticipated end of 2006), 2) the Statewide Diversity Study Status Report, and 3) the Dual Credit/Dual Enrollment Task Force convened by the Kentucky Department of Education.